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ABSTRACT

This paper argues that a completed study pertaining to the various factors involved in the proper recognition and aesthetic application of moving images (primarily television pictures) should consider: (1) the individual viewer's general self-awareness, knowledge, expertise, confidence, values, beliefs, and motivation; (2) the viewer's understanding of society, institutions, and media in North America, and media fulfillment of viewer's needs, dreams, and desires; and (3) the viewer's knowledge and understanding of the idiosyncratic nature, the process and effects, of a visual communication medium such as television. On the basis of these factors the appropriate standards for the evolution of moving images must be drawn. The first section of this paper argues that the individual viewer's knowledge, awareness, and expertise are prerequisites for the establishment of the appropriate criteria that will assist in the recognition and evaluation of moving images. The second section explains how understanding society and institutions will help the individual viewer to create the necessary standards for the recognition and evaluation of moving images, particularly television images. The final section stresses the importance of the viewers' knowledge of the technical and artistic aspects of any given visual communication medium in the creation of the criteria for evaluating its message.. (Contains 44 references.) (Author/ALF)

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COGNITIVE FACTORS IN THE STUDY OF VISUAL IMAGES. MOVING IMAGE RECOGNITION STANDARDS

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Abstract

This paper argues that a completed study pertaining to the various factors involved in the proper recognition and the aesthetic application of moving images (primarily television pictures) should consider: (1) the individual viewer's general awareness, knowledge, expertise, values, beliefs, etc., (2) the viewer's understanding of society, institutions, media, etc., and (3) the viewer's knowledge and understanding of the idiosyncratic nature of a visual communication medium such as television. On the basis of these factors the appropriate standards for the evolution of moving images must be drawn.

COGNITIVE FACTORS IN THE STUDY OF VISUAL IMAGES: MOVING IMAGES RECOGNITION STANDARDS

Knowledge of both the neurophysiology of the brain which underlines the functions of its information centers and the psychology of the mind which indicates its mental operations are important foundations for the study of visual learning. But they are not enough. To complete the study pertaining to the factors involved in the recognition and appreciation of television images we need to examine the cultural factors as they relate to the individual viewer, to society and the media institutions to which an individual is exposed, and to the idiosyncratic nature of the television medium. After all, individual viewers control both their biological and psychological activities and make the final cognitive decision as to the meaning they wish to assign to the pictures they watch. However, viewers of the visual communication medium of television do not exist in a vacuum. They belong to a cultural environment which provides them with skills, habits, norms, learning, etc., all of which shape their behavior attitudes and form their experiences and memory systems. The standards for the recognition and final appraisal of television images can only be drawn accurately if we properly examine the cultural factors that relate to individual viewers with society and the media. This is precisely the purpose of this paper.

Specifically, in this paper the following topics are discussed: (1) the individual television viewer's general awareness, knowledge, expertise, values, beliefs, motivations, etc., (2) the individual's understanding of society, institutions, media, etc., and (3) the individual's knowledge and

understanding of the process and the effects, the idiosyncratic nature of the visual communication media in general and television, in particular.

A. Self-Awareness, Knowledge and Expertise, and Values

Although all cognitive operations of the human mind including thinking, understanding, interpreting, recognizing, etc. are, of course, subjective and idiosyncratic to the individual, we can predict how the individual will perform such mental operations when given a general task such as interpreting the message of a common television program. We assume that the individual viewer has the necessary knowledge, expertize, skills, and literacy to recognize, interpret, and appreciate the visual images to which he/she is exposed. From the day we are born to the day we die our parents, teachers, friends, institutions, and the society we live in all help to provide us with the guidelines which will help us survive, communicate with each other, and progress. The language, symbols, signs, and arts we learn and to which we are exposed are the common carriers for communication among us. They are the link that ties us together and makes us homogeneous members of the society.

Today's media technologies, predominantly computerized visual communication media, have reached worldwide dimensions and have transformed the citizens of the particular countries of the world into peasants of the global village (McLuhan & Powers, 1989). Culturally, politically, and socially inhabitants of the global village are influenced by media, particularly television, who are the hegemonies of the global village. Pioneering studies on the process and the effects of mass communication (Jacobs, 1961; McQuail, 1969; Schramm & Roberts, 1971), cultural studies

on the influence of the media on artists expressions of the people in mass society (Rissoner & Birch, 1977; Rosenberg & White, 1957), social studies of the influence of the media on the individual's way of living (Agee, Ault, & Emery, 1988) and behaving in the society, and finally, critical studies on the artistic merits of programs produced by the media (Burns & Thompson, 1989; Newcomb, 1982) indicate that the visual communication media, particularly television, decisively influence the individual viewer.

Under those circumstances how, then, does an individual obtain the necessary knowledge and expertize to accurately recognize, clearly understand, and properly interpret the moving images of the television programs he/she is watching? What should the viewer's standards be for the accurate execution of these cognitive processes? We suggest that self-awareness and knowledge, expertize and confidence, values, beliefs, and motivation be among the most significant standards.

1. Viewer's Self Awareness and Knowledge.

Although it is increasingly more difficult for the average person to escape the influence of the homogeneous mass society which is ruled hegemonically by the visual communication media, it is important that parents, family, and peers in the early stages of development and, at a later stage, teachers and learning institutions assist the individual to develop curiosity, alertness, awareness, and interest in different issues, topics, phenomena, circumstances, etc. It is important, for example, for parents and teachers to challenge young minds and turn their attention away from the common and the mundane towards the diversified, the unusual, and the dynamic.

The individual's breaking away from the usual will enable him/her to see and to experience different points of view. It will make the individual aware of the different sides of the phenomena and the issues. Exposure to as many points of view as possible is the road that leads to new discoveries and awareness. When individuals are challenged and given the change to experience diversified points of view they form opinions of their own and understand the role they play in the society in which they live. To accurately and objectively judge and interpret one must be cognizant of all factors involving the object or event to be evaluated.

The recognition and appreciation of television images, like all other areas, requires the viewer's general knowledge which includes academic, social, economic, political, cultural, media, etc. It is evident that in order to seriously discuss or to communicate responsibly on an issue one must be aware of it and knowledgeable about the factors related to it. This is seldom the case, however, in complex circumstances as viewing a television program. Ignorance in such areas as (1) the message or content of the program, (2) the medium itself in terms of the visual and auditory choices made by the director to show and tell the story, and (3) the particular types of viewers the program addresses (including their social status and level of intelligence) will result in misinterpretation of the television images. Do all viewers have such knowledge?

The general knowledge required for the proper interpretation of television messages is provided by studies in many different disciplines. However, the specific knowledge one can obtain today in order to enhance the standards of recognition and appreciation of television images can be

have learned how to think visually, by learning how to draw pictures or by formally studying the media are considered more skilful, have more expertize, and obtain more confidence in their cognitive task of recognizing more readily and commenting more intelligently on television images. Today's mass availability of home video cameras has turned the majority of people in technologically developed countries such as Japan, the United States, Canada, England, France, etc. into moving image makers and experts in interpreting visual and auditory messages. Such video camera availability in the homes of a wide variety of individuals has strengthened their confidence not only in handling the image making tools properly but also in judging how the image maker manipulates the shots to arrive at the intended visual message.

It is necessary in the primary and secondary education levels for visual literacy to be a major part of the curriculum, considering that as residents of the global village we acquire our information mostly through television. We must provide students with the expertize and confidence needed, as viewers of televised messages, with the appropriate standards for such a cognitive activity.

3. Viewer's Values, Beliefs, and Motivation.

The appropriate recognition of moving images and the final meaning we assign to them are highly influenced by our own values, beliefs, and expectations which are cognitive operations stemming from our exposure to the society we live in. We form our opinions of how much it is worth our effort to engage in an activity or how important one program is to watch over another, etc. On the basis of these values we judge, comment upon, or

found in such fields of study as art (art history, appreciation, etc.) criticism (particularly mass media criticism), communication (particularly visual communication), semiotics, media studies (particularly television and films), to mention only a few. Students of visual learning must be aware and fully knowledgeable of these fields. The standards for recognizing and properly interpreting television images are drawn from the findings of all these studies. Television viewers who do not acquire such knowledge do not have solid standards of interpreting televised images. The global village society does not encourage its individuals to obtain both the general and the specific knowledge necessary to build the standard of recognition and appreciation of television images. Visual learning which provides such knowledge, it is hoped, will fill this vacuum.

2. Viewer's Expertize and Confidence.

Television viewers standards for recognition and interpretation of visual and auditory elements that compose the pictures are also based upon their expertize in the construction of visual images and their confidence of themselves as individuals. We combine these two factors because one basic and crucial contributor to one's own confidence is the acquisition of expertize.

The average television viewer, of course, does not posses expertize in television production techniques. But constant (high level) exposure to television enhances viewer's understanding of how television works in producing the images and sounds of televised messages. On the other hand, low-level viewers who watch television sporadically can claim less understanding and knowledge of how the medium works. Viewers who

even act throughout our lives. When such values are wrongly formed due to environmental, cultural, religious, political, pedagogical reasons our standards for judging are shattered and misinformed. Forming the appropriate values is not an easy task and we spend our entire lives working towards that goal.

Alongside the values are the beliefs we form on issues and phenomena we assume to be real and truthful. Beliefs seem to be of greater value and individuals seek those figures (political, religious, academic, etc.), institutions, or movements which help them form certain beliefs. Human activities are guided by beliefs which consciously or unconsciously constitute the bases that form the standards for our decisions and generally our cognitive processes. Recognition and appreciation of televised images are based on the beliefs we have formed on the picture elements we watch.

As expertize and skills help build our confidence so does motivation build up one's ability to engage in the process of critical viewing, comprehending, and interpreting television images. The accurate recognition and proper interpretation of television pictures is not a passive activity as once thought to be. Viewers who watch a dramatic program, an interesting information program, or a catastrophic event are totally motivated and for one reason or another are totally drawn into the program. The emotional state or mood of viewers determines the degree of their motivation to watch and to appreciate a television program. Consequently, a basic factor, a standard for the accurate recognition and proper appreciation of television images is motivation or the willingness to engage in such a cognitive activity. A television show with a significant subject, an artistically staged play (in

accordance with the rules of television images composition), and a clearly defined audience (to which the show addresses itself) will be successful and will most likely motivate viewers to watch it (Metallinos, 1973).

B. Understanding of How Society and Institutions Work

Another prerequisite or standard for the accurate recognition of the message in a given television program is the individual viewer's knowledge and understanding of how society and institutions are formed, how they function, and how the individual relates to them.

Visual communication media such as film and television are institutions created by individuals who work under the rules, guidelines, and regulations provided by society and the particular country. As a creation of a society, media strictly reflect the values and beliefs, political, cultural, economic, religious, etc. of the people of that society. The institutions, arts, and media arts created by a society should reflect the value system, the philosophy, the ideology of the people of the society. They are the modifiers and reflectors of that society (Read, 1970).

As such, media arts of a particular society are created to serve at least three major purposes: (1) to illustrate the basic values and beliefs of the society, (2) to promote the society's basic philosophies, and (3) to fulfill the needs, aspirations, and desires of the people of the society which could be emotional, psychological, spiritual, ideological, educational, entertaining, informational, and a host of others. Whereas conventional sociologists theorize that the media and arts produced by the media of a society are simply institutions like schools, courts, churches, etc., contemporary media scholars and sociologists of mass culture suggest that such is the hegemonic

power of the mass media in some contemporary societies (i.e., North America) that they shape the society rather than be a part of it. The power of the media as conglomerate institutions is as such that they dominate, often dictate, impose, and even set the agenda which society is forced to adopt and to follow. It is, therefore, obvious that the understanding of how society and institutions work is a prerequisite for the cognitive process of assigning appropriate meaning and accurately translating televised messages. In this section we examine briefly (1) how the mass media, particularly network television, reflect the values and beliefs of the societies (American and Canadian), (2) how they propagate these beliefs, myths, and philosophies, and (3) how they manage to fulfill the needs, dreams, and expectations of the North Americans.

1. Media and Society in North America.

Due to the predominant role of the media, mostly print and electronic media, in the United States and Canada, these countries have been characterized as media, information, and mass societies of the electronic age, and the like. They are the perfect paradigm of McLuhan's prophecy (McLuhan & Powers, 1989) of the Global Village. It is imperative that as citizens of these countries we realize that the more we depend on the mass media, particularly television, for our information, education, entertainment, etc., the more we become victims of the monopolistic ideology of the producers of these media. Availability of information offered by easily accessible media technology tends to turn us all into homogeneous, one-track minded, brainwashed, so-called couch potatoes if we are not selective. We must be aware of this danger and we must realize how some powerful

institutions can supersede and surpass the democratic systems governing the people of our societies.

Mass media in North America might work under a democratically free system but they have the tendency, like the dictatorial and totalitarian systems, to impose upon their viewers symbols, codes, ideas, messages, signifiers, and ideologies which do not necessarily reflect the society's real concerns and do not have its consensus. Instead, they impose the media institution's own points of view. This has been a grave problem in North America, particularly during the last fifty years since the establishment of network television, the information explosion, the advent and the widely explosive application of computers in visual communication media technologies.

The most advanced countries of the world, the United States and Canada, with the most informed citizens, also have the most vulnerable and defenseless masses of people against the power, influence, and commercially oriented propaganda of mass media. Low income, ethnic minorities, and even main stream middle-class heavy television watchers constitute the majority of the viewers in these societies, decisively influenced by what they watch and learn from television, including such important decisions as voting for representatives and heads of governments.

In short, the danger in North America is that the monopolistic and manipulative power exerted by the mass media on the majority of the people of these societies will surpass the guiding and governing role of the society. Instead of the media, particularly television, reflecting society and communicating institutional values and beliefs of the society, the media set

the agenda and shape the rest of the institutions to such an extent that they become, or they are, synonymous with society. This factor constitutes a standard in the cognitive process of televised picture communication and should not be overlooked by students of visual learning.

2. Media Myths and Beliefs in North America.

It was established in the discussion above that mass media in North America, and particularly network television, do not simply mirror the culture, political system, values, and beliefs of the society which has created them but rather often suggest and even dictate what these values and beliefs should be. It is this point that must be brought into focus because our cognitive decision on issues regarding the efforts of the visual communication media is greatly influenced by the media. In this section we will examine how this happens and what specific tactics are employed by the mass media to achieve their influence and control.

The common tactics of persuasion and propaganda use various means such as repetition, rhetoric, suggestibility, symbols, subliminal messages, etc. We will briefly examine some of these tactics used by commercial television in North America, mostly commercial and cultural myths. The subjects of persuasion, attitude change, political propaganda, etc. will not be discussed here. They have been studied in various other fields such as psychology and political science and have shown how successfully the mass media have used them through the centuries (Brown, 1963; O'Keefe, 1990).

Advertising dominates all commercial and business propaganda in North America with persuasion tactics used by the media and employed by businesses. The powerful economies developed in North American societies

owe their success to the free market system which encourages competition and is stimulated by sophisticated, aggressive, and vigorous mass media advertising. Television itself, as an institution and a medium of communication in North America, was developed as an advertising medium and this is a fact that should always be remembered. The three most significant factors regarding the persuasive power and decisive influence of network television advertising in North America are as follows: First, commercial advertising in American and Canadian network television is generally slick, better looking, more interesting than the subsequent television programs. Advertising agencies and television advertising producers, realizing the importance of persuasion and having experienced the successful results of commercial network television advertising, spend more money, hire competent and knowledgeable writers, producers, directors, and generally apply all the appropriate rules of visual communication media production. Second, commercial advertising in network television in North America is concise, compact, confined only to the precise persuasive goals set forth by the particular ad. Seldom does a commercial network television ad of a significant advertising agency fail to reach its target audience or extend its persuasive visuals and sounds beyond the absolutely necessary. In 10, 20, 30, or 60 seconds, depending on the decided length, the message is clear, the visuals impressive and distinctive, the sounds carefully selected to match the visual composition, the framing, editing, set, etc. all carefully applied and concisely interwoven. Third, television commercials reach a great range of audiences and successfully fulfil their desires, dreams, aspirations, needs, expectations. Unlike the

regular television programs which by necessity can appeal only to a certain category of viewers, the average North American network television viewer is exposed to a large number of television ads which fulfil a great variety of the viewer's psychological needs, desires, etc. Advertising influences viewers attitudes and cognitive process of assigning meaning to televised messages.

The creation of myths, defined as "...a fable or legend of natural upgrowth, embodying the convictions of a people as to their goals or other divine personages, their own origin and early history and the heroes connected with it..." (The New Webster's Dictionary, 1965, p. 556), is yet another cultural indicator deeply rooted in the subconscious of regular commercial network television viewers in North American society. Created either by regular, dramatic, or popular television programs, information related television shows such as newscasts, magazine program, international talk shows, or television commercials, myths are effective persuasive factors deeply influencing the cognitive process of television viewers. An example from existing literature on dramatic television series and newscasts will confirm the decisive role media myths play in determining the standards for recognizing and assigning meaning to televised images. In his analysis of the then popular dramatic and prime time ex-television series The Waltons, Roiphe (1979) suggests that by watching the show the American people created the myth that all was well in American Society just as all was well with the members of the Walton family. Therefore, the mythical world of The Waltons offered an escape from the real, cultural, political, economic, and other issues of American society's real life. Roiphe (1979) admits that

the creation of myths by television popular programs has some positive aspects to it particularly in providing a break from the realities of life. But he warns that: "It could be said that these myths torment us, describing role fulfillments that aren't there, promising marital peace that never arrives and forcing us to stare at the pitiful discrepancy between what is and what we would want" (p. 14).

In his article "Kaptain Kronkite: The Myth of the Eternal Frame" Curtis McCray (1979) explains how North American network television viewers who watch various popular television programs for a considerable number of years create mythical heroes of the major characters of these programs who provide entertainment, information, solutions to serious problems, reassurance, confidence, etc. through the television frame. The heroes of the then two popular programs Captain Kangaroo and The CBS Evening News with Walter Kronkite gained mythical dimensions with their appearances on the frame. Their behavior and the program's format deeply influenced the cognitive process of viewers Commenting on this issue McCray (1979) states that:

> While I would make no claims for the ultimate artistic greatness of CK or WK, I would argue that formally the shows do tap us somewhere deeply in the recesses of our cultural consciousness. Or, to return to the original question of this essay, I do believe commercial television is engaging man in the gravity of his own self-perception-the epic has always done that. (pp. 332-333)

The myths and heroes created by various television programs help commercial television North American viewers create their values and form

their beliefs in accordance with the patterns and examples given by television characters. Our cognitive decisions on matters related to television pictures are highly influenced by such media myths and beliefs.

3. Media Fulfillment of Viewers' Needs, Dreams, and Desires.

Other contributing factors to the establishment of the recognition standards of television images are viewers needs, dreams, and desires that various television programs fulfill on different levels. This important factor has a long history and is deeply rooted in the subconscious of people of all cultures. People of a society and a specific culture create their art forms such as music, dance, poetry, theatre, etc. in order to (1) express themselves as artists, (2) reflect their societies values, and (3) fulfill various psychological needs and desires. The psychological functions of the arts in providing the means by which people can rid themselves of inner fears, guilt, sorrow, etc. and can be inspired, motivated, and fulfilled as well as informed and educated, was first pointed out by the ancient Greeks. Modern psychologists such as Aronoff (1967), Freud (Jones, Prince, Strachey, & Strachey, 1959; Strachey, 1960), and Maslow (1954) have given us scientific proof of what was known to Plato and Aristotle some 2500 years ago. Contemporary media scholars, particularly television program analysts (Adler & Cater, 1975; Novak, 1979; Wood, 1979; etc.), established quite accurately the role that various television programs in network North American television play in fulfilling the needs, desires, aspirations, dreams, etc. of a great number of people. We will provide certain examples of these works.

Plato and Aristotle were the first to point out the emotional/psychological effects of the arts, and in particular music and drama, on spectators. Plato suggests that spectators listening to a rhapsody or watching a drama are often fearful and deeply involved. This, Plato suggests, could be dangerous (Dickie, 1971). Aristotle, a student of Plato, in the The Poetics not only acknowledges the emotional/psychological effects that drama (in all its forms, tragedy, comedy, or satire) has on the spectators but suggests that the function of a good drama is to stimulate the spectator so deeply that the action on stage will provide emotional release through crying or laughing, termed "emotional purgation" (Dickie, 1971).

On the basis of Maslow's (1954) theory of personality, his student J. Aronoff (1967) developed the theory of psychological needs fulfilled by the cultural activity of a society of which media arts is a part. The Maslownean (1954) hierarchy of needs, thoroughly developed in his book Motivation and Personality reached five levels: (1) physiological such as hunger, sex, thirst, etc., (2) safety, such as fear of death within the family, fear of physical assault, (3) love and belonging such as the need to love and to be loved, the need to feel that one belongs to a family, etc., (4) self-esteem such as the need to acquire strength, dominance, recognition, etc. in a society, thus gaining prestige and self-esteem, and (5) self actualization such as the need to exploit one's talent, capacity, potential, skills, etc. (Aronoff, 1967). To the various levels of the needs expressed above by Maslow (1954), Aronoff (1967) added many others stemming from psychology and sociology related to the arts and culture of the people of a society. In short, Aronoff (1967) suggests that all cultural systems and human institutions provide the bases

upon which the psychological and social issues are explored and therefore concludes that the media arts of the society are created to meet these premises.

Finally, contemporary media analysts such as Nova (1979), Wood (1979), etc. suggest, quite convincingly, that network North American television programming either acts as a dream for the spectators or fulfills the dreams spectators might have for a better life, luxury home and car, prestigious job, etc. The great variety of television programs today offers both dreams of living vagariously while watching exotic places or people and dreams that take one away from reality for as long as one is engaged in watching television. In either case, television programs fulfill this basic psychological human need, as they do with the entire spectrum of such needs as seeing authority figures either exalted or dishonored, evil punished, and virtue rewarded. The list is as endless and as vast as are the human emotions, psychological desires, and aspirations of every spectator of television pictures who expects to be fulfilled. Hence, television programs reach the individual with the dispositions of fulfilling their dreams and satisfying their needs and desires.

C. Study of the Process and the Effects of Visual Communication Media

In addition to personal awareness, knowledge, and expertise (described in section A) and an individual's knowledge of how society, institutions, and media work (discussed in section B), the development of the standards for the recognition and appreciation of television requires study and familiarity with the technical aspects of the medium (its hardware) as well as the artistic aspects of the medium (its software). The fulfillment of this

prerequisite is extremely crucial because it focuses directly on the medium's two most important areas of study, its processes and its effects and helps us to acquire the value judgements most appropriate for the technical and the artistic evaluations of televised images.

In this section we examine briefly (1) the technical aspects known also as process of the television mediums, (2) the artistic or compositional aspects of the medium, and (3) provide an inclusive list of criteria for the evaluation of an educational television program.

1. Technical Aspects of Television Images.

What characterizes a visual communication medium and distinguishes it from any other are the picture components it uses: the television cameras, microphones, switchers, lights, and editors are the specific hardware, the tools that television medium utilizes to produce its visual messages. Obviously, students of visual literacy must know how these tools work and what their potentials and limitations are. If, for example, a painter does not know how to mix colors or use a brush, how could he/she claim to know about painting? Equally, students of visual learning, particularly of television images, must know how the hardware of the medium work in order to produce television images. The foremost academic study dealing with this is television production.

In addition to the knowledge of the hardware of visual communication media, scholars of the aesthetics of television suggest that the substance or materials of the television medium which differ decisively from those of other visual communication media such as film or photography, must be studied separately and systematically (Metallinos, 1979; Tarroni, 1979;

Zettl, 1990). The substances from which television images are made of are lights and colors. Consequently, the study of lighting instruments and their subsequent lighting control systems is an important prerequisite for the study of television production and visual learning. The fact that the television picture is made of light not only distinguishes television from other media, but dictates the particular lighting techniques appropriate only to the television medium. Furthermore, television requires skilful handling of lighting instruments and sensitivity as to what the instruments can or cannot do. This, however, is not always the case with television production lighting engineers, as will be discussed herein.

The third important factor that distinguishes the medium of television (technologically) from other visual communication media is the production techniques it uses to create television images. The unique way by which the lighting engineer handles lighting instruments to create a particular mood of a scene or the way the camera operator frames the picture for a dramatic moment of a scene; the way by which the editing was decided by the director, or the different ways by which the engineer handles the sounds for the particular scene all constitute the techniques most appropriate for the medium of television. Lighting, framing, editing, or audio techniques for television should not be the same as those used by theatre, photography, or film. They are different because each medium has developed its own production techniques.

In summary, the knowledge and understanding of the distinct technologies of television in terms of the hardware and the production

techniques it uses to produce its images and sounds, are significant factors in building the standards of recognition and appreciation of televised images.

To the knowledge of unique hardware, substance, and production techniques of the medium one must add the need for a detailed understanding of the four most prominent components (all in the area of the hardware) of the television medium. These are: (1) light and lighting techniques, (2) cameras and framing or staging techniques, (3) time-motion and editing techniques, and (4) audio techniques. In television production the learning of these four components constitutes the basis of the study of the medium. In visual learning the systematic study and knowledge of these components are important, as the examples hereunder emphasize.

The manipulation of the television lighting instruments to create prominent attached or cast shadows is what television lighting is all about. Learning, therefore, which lighting instruments (directional or diffused) to use, where to place them (i.e., above or below eye level or at what angle), and with what intensity (required number of foot candles) in order to create a high key lighting technique or a daytime scene is obviously closely related to picture recognition and appreciation.

The manipulation of television space (both negative or empty and positive or occupied space) is what constitutes television framing and staging techniques. It is necessary therefore to know where to place the objects or stage the action (positive space) and where to place the cameras in relation to the objects (camera position and angle), the distances allowed for subject (primary) and camera (secondary) movements which depends on the potentially available negative studio space, all determine how the picture is

framed by the television camera operator, and this, in turn, will enhance television picture recognition and appreciation.

The manipulation of televised images in regards to their sequential appearance is what television editing is all about. Learning, therefore, which shot was chosen (long, medium, close-up, etc.), by which camera (visual direction), at what time (point of interest and punctuation), etc. are significant factors for the proper flow of information. This is a crucial factor for the recognition and appreciation of televised messages.

Lastly, the manipulation of sounds and the audio components used to match the visuals that accompany them is what television audio is all about. Learning how each microphone works (omni-directionally, unidirectionally, etc.), where to place the particular microphone for maximum sound pickup, how to select the appropriate sounds visually compatible to the picture's synthesis (matching criteria for pictures and sounds) are all important factors in the construction of televised images and are significant and mandatory knowledge for the proper recognition of television pictures.

In summary, the study of the technologies used and the techniques applied by the visual communication medium of television provides the bases upon which the standards for picture recognition in particular, and visual learning in general, should be built.

2. The Artistic Aspects of the Television Images.

One of the basic and most crucial prerequisites for proper recognition and appreciation of television images is their analysis as art forms. All art forms, regardless of the category under which they fall are difficult to study due to their complexity. The study of television as an art form is even more

difficult for various reasons. There is a great deal of confusion in North America as to what network, educational, and video art television are. We call everything television when we must differentiate various categories of it since each one has created several types of programs or production formats which must be analyzed on their own merits. Therefore we must first distinguish these three forms of television. The medium of television, regardless of its category, is a considerably new medium and today there are a limited number of empirical studies dealing with the artistry or the compositional aspects of the medium (Metallinos, 1985; Newcomb, 1982). This lack of vigorous scientific research on the compositional factors of television has considerably delayed the development of those particular compositional principles governing the production of television images. Yet another reason which made the study of television as an art form difficult was its commercial or business origin, its mass communication scope, and the thought that television was an advertising device. This business concept dominated the television industry and effected all types of television programming by shaping both the content and its form of presentation.

Serious efforts have been made, however, during the last ten to fifteen years to establish the bases on which television, particularly the educational and video art categories, can be studied as a unique art form with its own merit. Excellent texts on television production (Millerson 1972; Wurtzel, 1983; Zettl, 1992; etc.) have been published which provide detailed information on both the hardware and software of the medium. Empirical studies on factors related to various components of the television medium (Fletcher, 1979; Kipper, 1986, 1989; Metallinos, 1979; Thorburn, 1987;

Tiemens, 1970; etc.) have been published in the journals of our field which look at the compositional value of television lighting, staging, editing, and audio and various descriptive and critical studies on the compositional structure of television pictures (Newcomb, 1979; Tiemens & Avery, 1975; Zettl, 1990; etc.) have been published as books, articles, or conference papers which look at the medium's production (the television program) as an art form.

In this section, we examine the artistic or compositional aspects of television known also as the medium software and concentrate primarily on the unique features of television and the primers of television art literacy. What makes television unique as an art form? What is the nature and the idiosyncrasy of television? Although television categories (i.e., network, cable, educational television, or video art) have developed their own unique features and each type of program within each of these categories (i.e., soap operas, detective shows, high drama, experimental video shows, etc.) has created its own unique characteristics, we can generally identify some features common to all categories.

Television as an art form produces programs for a <u>simultaneous mass audience appeal</u>. Even video art programs which experiment with both various hardware and software of the medium, are transmitted simultaneously to a great number of viewers. The fact that the transmission of the programs is simultaneous and open to a massive audience dictates the content and outlines the form of program presentation which places it in the broader category of the popular arts. This is a unique feature of television as an art form.

Another unique feature is the threefold synthesis of its pictures which consist of visuals, audio, and movement, all of which work harmoniously to evoke viewers emotions. Although films also consist of sights, sounds, and motion, television differs from film in that it can present this threefold synthesis of the pictures electromagnetically and live. The television picture and in fact the entire television program is composed while in motion, the moment it occurs.

Several observers of the television medium as an art form have suggested that what distinguishes television from other media collectively are its "small size," its "immediacy," its "intimacy" (Millerson, 1972, pp. 198-202), its "viewing intensity" and "viewing involvement" (Toogood, 1978, p. 16). The programs produced by any category of television are art forms which are given to people who view a small vista screen, are directly in front of it, get deeply drawn in the action and become totally involved with it (Antin, 1982).

The most emphatically distinct feature of television as an art form is its metamorphic nature by which images are synthesized to tell the story. The juxtaposition of the television images occurs while undergoing a constant metamorphosis. The images, accompanied by appropriate narratives or sounds, are in constant flux changing from long shots to extreme close-ups, sometimes expanding, other times swinging, often flipping over, etc. Only live television can achieve this. The art forms produced by television which utilizes such features are unique. In assessing and evaluating this unique characteristic of the television medium art, Zettl (1978) states:

> When television is used to create it simply grabs from external reality the bits and pieces it needs for this creation. When performing this function television becomes metamorphic. It no longer translates, but transforms, yes, even transcends the raw materials of external reality into an event that cannot exist outside the medium itself. A video synthesized image, is, of course, an extreme case, whereby the image is electronically induced. But even an extensive super, or a key-matte, or a multiple screen events give television its formative metamorphic function. (p. 7)

Let us turn now to the specific new television materials that constitute the primers of the art of television and provide the television literacy in our quest for visual learning: Arnheim (1969) in his Art and Visual Perception and Dondis (1973) in her A Primer of Visual Literacy give us the basic new materials and elements that compose all visual arts. For Arnheim (1969), a gestalt psychologist, the basic elements of the visual arts are balance, shape, form, growth, space, light, color, movement, tension, and expression. Paintings, sculptures, architecture, film, photography, music, theatre, etc. all have these compositional elements in their synthesis. Their artistic analysis and aesthetic evaluation should be based on the proper syntheses of all these elements. For Dondis (1973), the raw materials in the synthesis of the visual arts, also known as primers of visual communication arts, are the dot, line, shape, direction, tone, color, texture, dimension, scale, and movement. The analysis and aesthetic evaluation of any visual art form should be based on the way these elements are organized to create the art form.

In addition to these materials, most of which are interwoven with the television image, the artistic evaluation of television programs should be based on the way the picture's visual elements are created and composed. They fall into three categories corresponding to the threefold nature of the television pictures: visuals, sounds, and movements. In the first category the lights and colors constitute television's primers and occur either as chiaroscuro lights (characterized by their distinctive darkness or lightness of the cast and the attached shadows that are created by television's directional or diffused lighting instruments) or as flat lights (characterized by the overall, unified brightness and evenly distributed light on the scene). Television colors occur either as prime colors (blue, red, and green) from which all other combinations of colors are achieved or as additive and subtractive colors created by various combinations of primary and secondary colors. The artistic quality of television pictures obviously depends on the proper usage and synthesis of these primers to the entire television program.

Various visuals created by the television camera and manipulated by the television switcher or special effects video synthesizer also constitute the primers of television literacy and occur in different forms. They appear as long, medium, or close-up shots depending on the narrative form chosen by the director. They are matted, chromakeyed, split-screened, zoomed in or out, etc., again depending on the audio truck and the story they unfold. All visual special effects created by video synthesizers such as fades, dissolves, wipes, superimpositions, etc. constitute the primers of television literacy and are the fundamental elements that compose the television art form.

In the second category of sound such basic sound elements as literal (i.e., sounds derived from the source that creates them such as waterfalls, airplanes, traffic, etc.) or non literal (i.e., music sounds, such as violins imitating the sound of autumn leaves falling, etc.) constitute the primers on which the analysis of the television picture and television programs are based. Also, such elements of television sounds as pitch, timbre, duration, loudness and attack-decay or such basic sound structures as melody, harmony, homophonic and polyphonic, or picture sound combinations either homophonically or polyphonically structured, and picture sound matching combinations either thematically, tonally, rhythmically or historically are the most basic, fundamental elements that compose television art forms (Zettl, 1990).

The various perceptual motions discussed earlier such as real, apparent, and implied as well as particular movements that take place when a television program is videotaped such as the motions of the subject and the camera, and the motion created by the flow of the action within the visual field are the motion primers of television programs as art forms. They constitute television literacy. To these various types of motions in television pictures the roles of slow and accelerated motion are significant because they make television a unique medium. The ability to accelerate, slow down, and replay moments of the past are not only unique primers of television but help to form the unique structures of television programs.

In summary, the study of the primers of television found in either images, sounds, or movements of visual elements provides the necessary criteria for the evaluation of television programs as art forms. The study of

the artistic aspects of television based on the knowledge of the software of the medium is a prerequisite for the establishment of the appropriate criteria (standards) for the accurate recognition and evaluation of televised images.

3. Established Criteria for the Evaluation of Education Television Programs.

Based on existing literature on television criticism (which includes several well written books, research articles, and conference papers) extracted from critical studies on related fields such as theatre, visual arts, film criticism, etc. and drawn from our own studies on television production related topics, we have constructed a list of value judgements or applied criteria for the evaluation of educational television programs. Before we refer to this inclusive list of criteria we must, first, underline the three major compositional principles which apply, unilaterally, to all art forms and we must define and explain what an educational television program is, in order to make our criteria list more explicit.

The compositional principles underlining all art forms, regardless of their nature or form of presentation are direction, proportions, and balance. Critics of the performing, visual, and media arts evaluate art forms on the bases of these three elements inherent in all.

Direction refers to the way the flow of action moves. It could be from left to right in the case of a moving image, or from morning to night in the case of a theatrical play's story. The established direction determines the flow and continuity, the sequence, events, action, or objects follow within the narrative and content of the art form. The events of a theatrical play, like

those on a television screen follow or should follow an established direction which, in turn, establishes continuity which is the foundation of the art form. Disorientation resulting from lack of direction causes confusion and breaks down the communication process of the art form. It is a fundamental compositional principle of all true art forms.

Proportions refer to the way artists adjust various parts of the art form to make them symmetrically or asymmetrically harmonious. Art forms are proportionally divided by the artists in their effort to make the form attractive, etc. A dramatist divides the dramatic form, the play, into acts with portions of plain dialogue or high conflict; a painter divides the canvas into areas depicting intensive action and areas of background visual information; a television camera operator, at the will of the director, divides the television picture into areas of prominence (foreground figures) and others with secondary importance (background) elements. A good work of art is aesthetically pleasing when proportionally divided to harmonize its various parts. This is a fundamental compositional principle for all art forms.

Balance, the third basic principle found in all art forms, refers to the degree of stability produced by the distribution and interaction of various parts of the art form and results in an aesthetically pleasing composition. According to Arnheim (1969), "An unbalanced composition looks accidental, transitory, and therefore invalid" (p. 12). Balance as a compositional principle can occur either as unstable, stable, or neutral, depending on the particular art form. In television picture composition all three forms of balance can be found interchangeably since television pictures are transitory

and metamorphic and create an even greater challenge to the producer/artist of televised images.

Educational television programs do not necessarily refer exclusively to those programs produced by such educational television networks as Public Broadcasting Service (PBS) in the United States, Canadian Broadcasting Corporation in Canada (CBC), or the British Broadcasting Corporation (BBC) in Great Britain, etc. The term refers to all television programs whose central theme is to present topics referring strictly to education and others produced by individual education stations, networks, or organizations such as the National Geographic Society, etc. Such recently televised programs as The Civil War or Nova are the most representative of the educational television programs referred to in this section. Although these programs place a strong emphasis on their central theme of learning and encyclopedic information they are written for, produced by, and presented via television. Consequently, the criteria for their evaluation are both specific, referring exclusively to their educational genres and general, referring to television programs as an art form.

The list of criteria provided below is divided into three major areas in accordance with the three most important functions or purposes television programs serve to explore the issue, present it, and reach a targeted audience (Metallinos, 1973).

A. Criteria Concerning the Content or Message

Although not exclusive, the basic criteria for discussing, analyzing, and evaluating the issues explored by an educational television program can be as follows:

1. Content/message significance and importance.
2. Accuracy of ideas and documentation, research.
3. Writing style and format (or genre).
4. Composition and dramaturgy of story.
5. Order and balance of segments.
6. Simplicity and complexity of treatment of the story
7. Pedagogical impact and importance of the message.

B Criteria Concerning the Medium or Form

The medium shapes the form and creates the art as a communicative agent. The criteria for the evaluation of an educational television program should be based on the two factors, production and performing, as follows:

1. Production Factors.

a. Lighting technique usage and effects, colors, and visual clarity.

b Cameras, lenses, effects, framing, staging, space utilization, and background/middle-ground/foreground interrelationships, screen composition, setting, etc.

c. Pace, motion, rhythm, editing techniques, special effects, graphics, image continuity.

d. Audio sound clarity, sound consistency, and coherence. Audio perspective, matching visuals with sounds, audio-visual reinforcement, audio visual balance, etc.

2. Performing Factors.

a. Performer's appearance, clothing, colors, etc.

b Age, sex, and character choices.

c. Body movements, stage (or camera) presence.

d. Eye contact, lens acting, naturalness.

e. Character interpretation and fitness within the context of the program.

f Delivery and believability of characters, etc.

C. Criteria Concerning the Program's Impact/Effects on Viewers

The third important purpose of the educational television program, as is the case with all television program formats, is to stimulate the audience and to cause reactions, to have an effect upon them which is closely related to the message. Such criteria can be as follows:

1. Audience identification. Who are the viewers?

2. Does the program fulfill its intended scope?

3 Audience reactions. Do they like it? If so, why? If not, why not?

4. Overall importance/significance/usefulness of the program to the target audience and to society at large?

5. Is the program tasteful? Does it contain violence, conflicts, models, or concepts that should not be aired?

6. What specific public needs does the program fulfil? (i.e., sociological, aesthetic, psychological, physiological, etc.).

7. Innovation--to what degree is the program different? etc.

In summary, the criteria for the evaluation of educational television programs should be drawn from the three main purposes of the program: the message, the medium, and the viewer.

Summary and Conclusions

The first section of this paper argued that the individual viewer's knowledge, awareness, and expertise are prerequisites for the establishment

of the appropriate criteria that will assist in the recognition and evaluation of moving images. The second section of the paper explained how understanding society and institutions will help the individual viewer to create the necessary standards for the recognition and evaluation of moving images, particularly television images. Finally, the third section of this paper stresses the importance of the viewers knowledge of the technical and artistic aspects of any given visual communication medium in the creation of the criteria for evaluating its messages.

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